

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 03/02212-0

## CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: H01L 21/20, 21/336, 29/786; H01S 3/10; B23K 26/02; C23C 16/24, 16/48

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: H01L, H01S, B23K, C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, IMPADOC, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/0110962 A1 (WADA et al.) 15 August 2002 (15.08.02) <i>fig. 7, abstract.</i>	1,2-5
A	US 2002/0083557 A1 (JUNG) 4 July 2002 (04.07.02) <i>fig. 4, 5; paragraph 35-46.</i>	1,2-5
A	US 2001/0019863 A1 (YANG) 6 September 2001 (06.09.01) <i>fig. 7, abstract.</i>	1,2-5
A	US 5302230 A (INO et al.) 12 April 1994 (12.04.94) <i>figs. 1-3; claim 1; abstract.</i>	1,2
A	JP 01 214011 A (SHARP CORP) 28 August 1989 (28.08.89) <i>fig. 1,3; abstract.</i>	1,2
A	JP 60 247488 A (HITACHI LTD) 7 December 1985 (07.12.85) <i>figures, PAJ - abstract.</i>	1

 Further documents are listed in the continuation of Box C. See patent family annex.

- \* Special categories of cited documents:
- „A“ document defining the general state of the art which is not considered to be of particular relevance
- „E“ earlier application or patent but published on or after the international filing date
- „L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- „O“ document referring to an oral disclosure, use, exhibition or other means
- „P“ document published prior to the international filing date but later than the priority date claimed
- „T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- „X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- „Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- „&“ document member of the same patent family

Date of the actual completion of the international search

12 December 2003 (12.12.2003)

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19 February 2004 (19.02.2004)

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 56 047288 A (HITACHI LTD) 28 April 1981 (28.04.81) <i>figures, PAJ - Abstract.</i>	1,2,6
A	JP 02 165880 A (HITACHI LTD) 26 June 1990 (26.06.90) <i>figures, PAJ - Abstract.</i>	1
A	JP 54 153745 A (NEC CORP) 4 December 1979 (04.12.79) <i>figures, PAJ - Abstract.</i>	1
A	JP 03 235040 A (DAICEL CHEM IND LTD) 21 October 1991 (21.10.91) <i>figures, PAJ - Abstract.</i>	-
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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/KR 03/02212-0

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP A 1214011A 2		none	
JP A 2165880A 2		none	
JP A 3235040A 2		none	
JP A 54153745 A2		none	
JP A 56047288 A2		none	
JP A 60247488 A2		none	
US A 20010019 863		none	
US A 20020083 557		none	
US A 20020110 962		none	
US A 5302230	1994-04-12	JP A 61226919 JP A 61227982 JP A 61163631 JP A 61161707	1986-10-08 1986-10-11 1986-07-24 1986-07-22